



This report is published weekly on the [PHE website](#). For further information on the surveillance schemes mentioned in this report, please see the [PHE website](#) and the [related links](#) at the end of this document.

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Summary

In week 04 2016 (ending 31 January 2016), influenza indicators continued to increase across surveillance schemes, including GP ILI consultation rates, the proportion of laboratory samples positive for influenza and influenza admissions to hospitals and ICU. The Department of Health has issued an [alert](#) on the prescription of antiviral medicines to the health service. Updated [guidance](#) on antiviral prescribing in secondary care when influenza A(H1N1)pdm09 is the dominant circulating strain has been published.

- [Community influenza surveillance](#)
 - During week 04, there were further small increases in GP consultations for influenza-like illness and NHS 111 cold/flu calls.
 - Fifty-one new acute respiratory outbreaks have been reported in the past 7 days. Thirty-three outbreaks were in schools where two tested positive for influenza A(H1N1)pdm09. Six outbreaks were from care homes where one tested positive for influenza A(H1N1)pdm09 and another one for influenza A(not subtyped). Six outbreaks were from hospitals where one tested positive for influenza A(H1N1)pdm09 and one for influenza A(not subtyped).
- [Overall weekly influenza GP consultation rates across the UK](#)
 - In week 04, overall weekly influenza-like illness (ILI) GP consultation rate has increased and is above the baseline threshold in England (19.7 per 100,000). ILI rates have increased in Wales (16.5 per 100,000), Scotland (16.2 per 100,000) and Northern Ireland (31.7 per 100,000).
 - Through the GP In Hours surveillance system, weekly ILI rates have increased but remain within seasonally expected levels in week 04.
- [Influenza-confirmed hospitalisations](#)
 - One hundred and twelve new admissions to ICU/HDU with confirmed influenza (fifty-two influenza A(H1N1)pdm09, fifty-nine influenza A(unknown subtype) and one influenza B) were reported through the USISS mandatory ICU/HDU surveillance scheme across the UK (137 NHS Trusts in England) in week 04, a rate of 0.23 per 100,000 compared to 0.19 per 100,000 in week 03. Eight new confirmed influenza deaths were also reported through this scheme.
 - Eighty-eight new hospitalised confirmed influenza cases (fifty-five influenza A(H1N1)pdm09, three influenza A(H3N2), twenty-six influenza A(unknown subtype) and four influenza B) were reported through the USISS sentinel hospital network across England (23 NHS Trusts), a rate of 0.95 compared to 0.89 per 100,000 the previous week.
 - Since week 40, twenty confirmed influenza admissions have been reported (fifteen influenza A(H1N1)pdm09 and five influenza A(unknown subtype) from the six Severe Respiratory Failure centres in the UK.
- [All-cause mortality data](#)
 - Up to week 04 2016 in England, excess mortality by date of death was seen in <5 year olds and 5-14 year olds in week 51 and in 15-64 year olds in week 50, 52 & 53 with the EuroMoMo algorithm. In the devolved administrations, significant excess was seen in Northern Ireland in week 04. No excess was seen in Wales and Scotland in week 04.
- [Microbiological surveillance](#)
 - Sixty-three samples tested positive for influenza (52 A(H1N1)pdm09, 2 A(H3), 4 A(untyped) and 5 B) through GP sentinel schemes across the UK, with an overall positivity of 32.6%.
 - Two hundred and ninety influenza positive detections were recorded through the DataMart scheme (two hundred and fifteen A(H1N1)pdm09, three A(H3), fifty-four A(not subtyped) and eighteen influenza B). A positivity of 18.9% was seen in week 04, compared to 13.8% in week 03, with the highest positivity in 15-44 year olds (25.7%). This is above the all-age threshold for 2015/16 season of 7.4%.
- [Vaccination](#)
 - Up to week 04 2016 in 87.1% GP practices reporting weekly to Immform, the provisional proportion of people in England who had received the 2015/16 influenza vaccine in targeted groups was as follows: 45.3% in under 65 years in a clinical risk group, 42.4% in pregnant women, 71.2% in 65+ year olds, 35.9% in all 2 year olds, 38.1% in all 3 year olds and 30.3% in all 4 year olds.
 - Provisional data from the third monthly collection of influenza vaccine uptake by frontline healthcare workers show 47.6% were vaccinated by 31 December 2015 from 95.4% of Trusts, compared to 52.6% vaccinated in the previous season by 31 December 2014. The report is available [here](#).
 - Provisional data from the third monthly collection of influenza vaccine uptake children of school years 1 and 2 age show the proportion of children in England who received the 2015/16 live attenuated intranasal vaccine (LAIV) from 1 September 2015 to 31 December 2015 was as follows: 50.6% in children school year 1 age (5-6 years) and 49.3% in children school year 2 age (6-7 years).
 - Provisional data from the third monthly collection of influenza vaccine uptake in GP patients up to 31 November 2015 has been published. The [report](#) provides uptake at national, area team and CCG level.
- [International situation](#)
 - Globally, influenza activity has increased in some temperate countries of the Northern hemisphere. High levels of influenza activity have been reported from some of the Western Asia countries.
 - Influenza activity in Europe continues to increase.

During week 04, there have been continued increases across a range of respiratory indicators. Fifty-one new acute respiratory outbreaks were reported in the past 7 days.

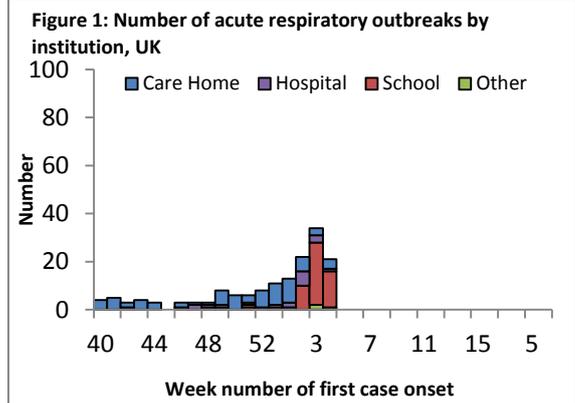
- PHE Real-time Syndromic Surveillance

- In week 04, there have been continued increases across a range of respiratory indicators, including further small increases in GP consultations for influenza-like illness and NHS 111 cold/flu calls.
- For further information, please see the syndromic surveillance [webpage](#).

- Acute respiratory disease outbreaks

- Fifty-one new acute respiratory outbreaks have been reported in the past 7 days. Thirty-three outbreaks were from schools where two tested positive for influenza A(H1N1)pdm09 and for the remaining results were not available/not tested. Six outbreaks were from care homes, where one tested positive for influenza A(H1N1)pdm09 and one positive for influenza A(not subtyped). Six outbreaks were from hospitals where two tested positive for influenza A(not subtyped) and one for A(H1N1)pdm09. The remaining six outbreaks were from other settings such as nurseries and universities where results were not available.

-Outbreaks should be recorded on HPZone and reported to the local Health Protection Teams and Respscidsc@phe.gov.uk.

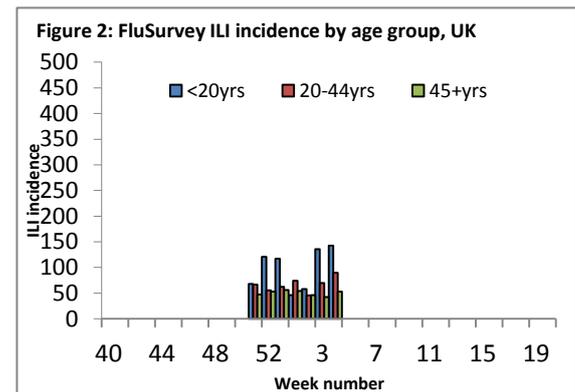


- FluSurvey

- Internet-based surveillance of influenza in the general population is undertaken through the FluSurvey. A project run jointly by PHE and the London School of Hygiene and Tropical Medicine.

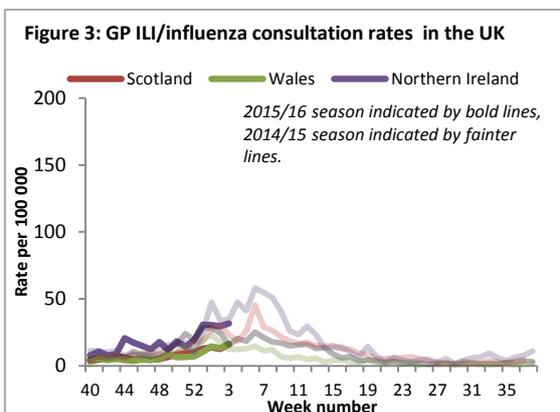
- The overall ILI rate (all age groups) for week 04 was 66.9 per 1,000 (163/2,438 people reported at least 1 ILI), with the <20 age group reporting a higher rate of 142.9 per 1,000.

- If you would like to become a participant of the FluSurvey project please do so by visiting the <http://flusurvey.org.uk> website for more information.



In week 04, overall weekly influenza-like illness GP consultations have increased in England and in the devolved administrations. This is the second consecutive week that the ILI rate for England has been above the pre-epidemic threshold.

- Influenza/Influenza-Like-Illness (ILI)



NB: As week 53 appears in 2015 but not in previous years, the figure used for week 52 in Figure 3 is an average of week 52 and week 53 data.

Northern Ireland

-The Northern Ireland influenza consultation rate has increased at 31.7 per 100,000 in week 04 compared to 29.5 per 100,000 in week 03 (Figure 3). This remains below the pre-epidemic threshold (49.4 per 100,000).

-The highest rates were seen in the 45-64 year olds (48.7 per 100,000), 65-74 year olds (42.0 per 100,000) and 15-44 year olds (28.4 per 100,000).

Wales

-The Welsh influenza rate has increased to 16.5 per 100,000 in week 04 compared to 13.2 per 100,000 in week 03 (Figure 3). This remains above the pre-epidemic threshold (10.3 per 100,000).

-The highest rates were seen in 15-44 year olds (26.7 per 100,000) and 45-64 year olds (17.3 per 100,000).

Scotland

-The Scottish ILI rate has increased to 16.2 per 100,000 in week 04 (Figure 3) compared to 12.6 per 100,000 in week 03. This remains below the pre-epidemic threshold (37.0 per 100,000).

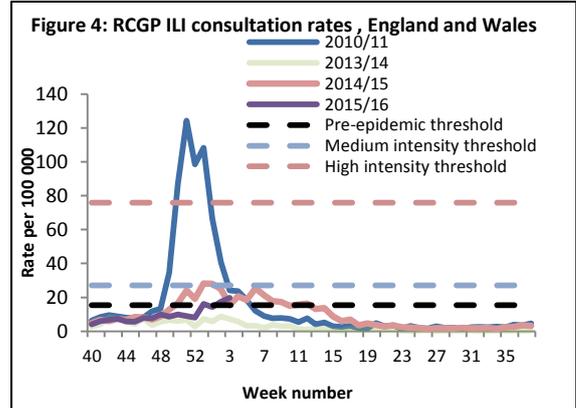
-The highest rates were seen in 45-64 year olds (21.8 per 100,000) and 15-44 year olds (19.0 per 100,000).

RCGP (England and Wales)

- The weekly ILI consultation rate through the RCGP surveillance system has increased to 19.7 per 100,000 in week 04 compared to 17.4 per 100,000 in week 03. This is above the pre-epidemic threshold (15.4 per 100,000) (Figure 4*). By age group, the highest rates were seen in 1-4 year olds (31.7 per 100,000), 15-44 year olds (24.6 per 100,000) and 45-64 year olds (20.6 per 100,000).

**The Moving Epidemic Method has been adopted by the European Centre for Disease Prevention and Control to calculate thresholds for GP ILI consultations for the start of influenza activity in a standardised approach across Europe.*

NB: As week 53 appears in 2015 but not in previous years, the figure used for week 52 in Figure 4 is an average of week 52 and week 53 data.



GP In Hours Syndromic Surveillance System (England)

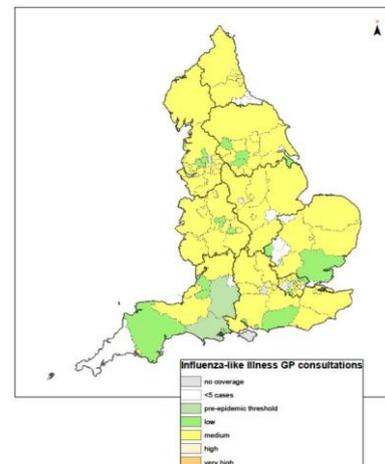
-The weekly ILI consultation rate through the GP In Hours Syndromic Surveillance system has increased at 13.8 per 100,000 in week 04 (Figure 5).

Figure 5 represents a map of GP ILI consultation rates in Week 04 across England by Local Authorities, using influenza-like illness surveillance thresholds.

Thresholds are calculated using a standard methodology for setting ILI thresholds across Europe (the "Moving Epidemic Method" (MEM)) and are based on six previous influenza seasons (excluding the 2009/10 H1N1 pandemic)

-For further information, please see the syndromic surveillance [website](#)

Figure 5: Map of GP ILI consultation rates in Week 04



Influenza confirmed hospitalisations

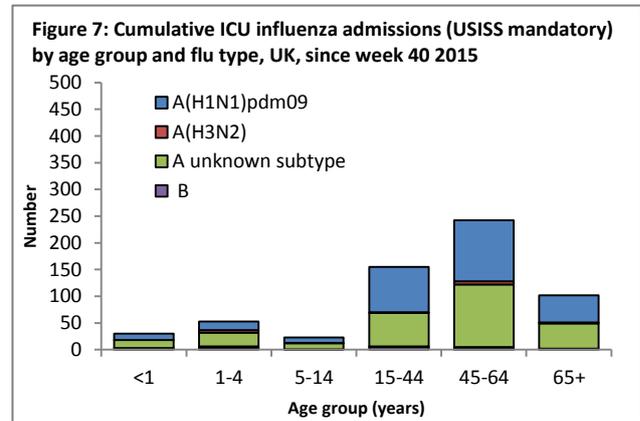
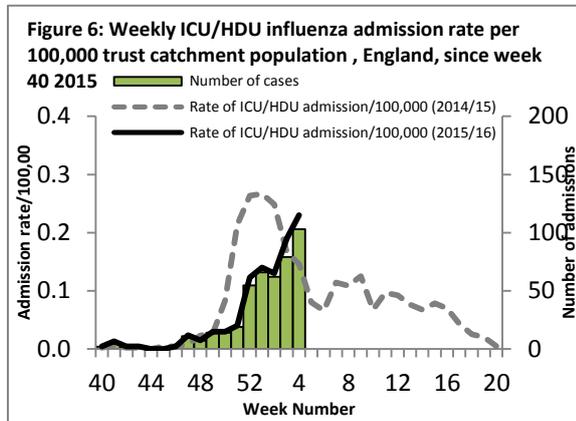
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In week 04, one hundred and twelve new admissions to ICU/HDU with confirmed influenza (52 influenza A(H1N1)pdm09, 59 influenza A(unknown subtype) and 1 influenza B) were reported through the USISS mandatory ICU/HDU surveillance scheme across the UK (137 Trusts in England). Eighty-eight new hospitalised confirmed influenza cases (55 influenza A(H1N1)pdm09, 3 influenza A(H3N2), 26 influenza A(unknown subtype) and 4 influenza B) were reported through the USISS sentinel hospital network across England (23 Trusts).

A national mandatory collection (USISS mandatory ICU scheme) is operating in cooperation with the Department of Health to report the number of confirmed influenza cases admitted to Intensive Care Units (ICU) and High Dependency Units (HDU) and number of confirmed influenza deaths in ICU/HDU across the UK. A confirmed case is defined as an individual with a laboratory confirmed influenza infection admitted to ICU/HDU. In addition a sentinel network (USISS sentinel hospital network) of acute NHS trusts is established in England to report weekly laboratory confirmed hospital admissions. Further information on these systems is available through the [website](#). Please note data in previously reported weeks are updated and so may vary by week of reporting.

- Number of new admissions and fatal confirmed influenza cases in ICU/HDU (USISS mandatory ICU scheme), UK (week 04)

- In week 04, one hundred and twelve new admissions to ICU/HDU with confirmed influenza (52 influenza A(H1N1)pdm09, 59 influenza A(unknown subtype) and 1 influenza B) were reported across the UK (137/156 Trusts in England) through the USISS mandatory ICU scheme (Figures 6 and 7), a rate of 0.23 per 100,000 compared to a rate of 0.19 per 100,000 in the previous week. Eight new confirmed influenza deaths were also reported in week 04 2016. A total of 504 admissions (226 influenza A(H1N1)pdm09, 14 influenza A(H3N2), 249 influenza A (unknown subtype) and 15 influenza B) and 47 confirmed influenza deaths have been reported since week 40 2015.

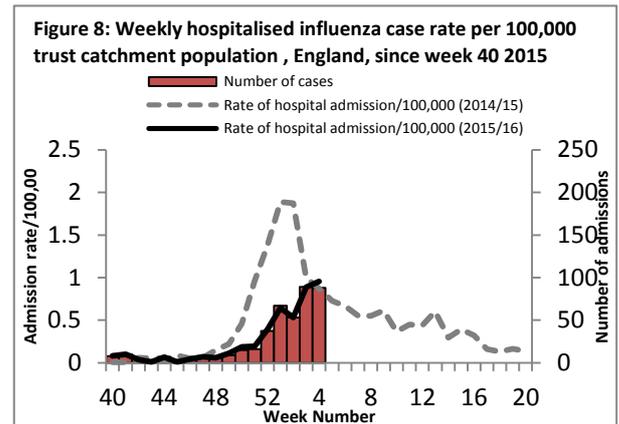


NB: As week 53 appears in 2015 but not in previous years, the figure used for week 52 in Figure 6 is an average of week 52 and week 53 data.

- USISS sentinel weekly hospitalised confirmed influenza cases, England (week 04)

- In week 04, eighty-eight new hospitalised confirmed influenza cases (55 influenza A(H1N1)pdm09), 3 influenza A(H3N2), 26 influenza A(unknown subtype) and 4 influenza B) were reported through the USISS sentinel hospital network from 23 NHS Trusts across England (Figure 8), a rate of 0.95 per 100,000 compared to 0.89 per 100,000 the previous week. A total of 443 hospitalised confirmed influenza admissions (319 influenza A(H1N1)pdm09), 14 influenza A(H3N2), 86 influenza A (unknown subtype) and 24 influenza B) have been reported since week 40.

NB: As week 53 appears in 2015 but not in previous years, the figure used for week 52 in Figure 8 is an average of week 52 and week 53 data.



- USISS Severe Respiratory Failure Centre confirmed influenza admissions, UK (week 04)

- In week 04, two new confirmed influenza admission to the five Severe Respiratory Failure Centres in England was reported (2 influenza A(H1N1)pdm09). Since week 40, twenty confirmed influenza admissions have been reported (15 influenza A(H1N1)pdm09 and 5 influenza A(unknown subtype)) from the six Severe Respiratory Failure centres in the UK.

All-cause mortality data

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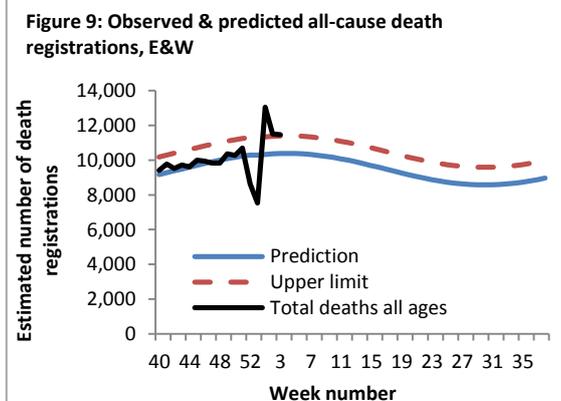
Up to week 04 2016 in England, excess mortality by date of death was seen in <5 year olds and 5-14 year olds in week 51 and in 15-64 year olds in week 50, 52 & 53 with the EuroMoMo algorithm. In the devolved administrations, significant excess was seen in Northern Ireland in week 04. No excess was seen in Wales and Scotland in week 04.

Seasonal mortality is seen each year in the UK, with a higher number of deaths in winter months compared to the summer. Additionally, peaks of mortality above this expected higher level typically occur in winter, most commonly the result of factors such as cold snaps and increased circulation of respiratory viruses, in

particular influenza. Weekly mortality surveillance presented here aims to detect and report acute significant weekly excess mortality above normal seasonal levels in a timely fashion. Excess mortality is defined as a significant number of deaths reported over that expected for a given point in the year, allowing for weekly variation in the number of deaths. The aim is not to assess general mortality trends or precisely estimate the excess attributable to different factors, although some end-of-winter estimates and more in-depth analyses (by age, geography etc.) are undertaken.

- Excess overall all-cause mortality, England and Wales

-In week 03 2016, an estimated 11,473 all-cause deaths were registered in England and Wales (source: [Office for National Statistics](#)). This is a slight decrease compared to the 11,501 estimated death registrations in week 02 2016, and is above the 95% upper limit of expected death registrations for the time of year as calculated by PHE (Figure 9). The sharp drop in the number of deaths in week 53 corresponds to a week where there were bank holidays and fewer days when deaths were registered. Therefore this drop is likely to be artificial.



- Excess all-cause mortality by age group, England, Wales, Scotland and Northern Ireland

-Up to week 04 2016 in England, excess mortality by date of death above the upper 2 z-score threshold was seen in <5 years olds and 5-14 year olds in week 51 and in 15-64 year olds in weeks 50, 52 & 53 after correcting ONS disaggregate data for reporting delay with the standardised [EuroMoMo](#) algorithm (Figure 2, Table 1). No significant excess was seen in other age groups. This data is provisional due to the time delay in registration; numbers may vary from week to week.

Table 1: Excess mortality by age group, England*

Age group (years)	Excess detected in week 04 2016?	Weeks with excess in 2015/16
<5	x	51
5-14	x	51
15-64	x	50,52,53
65+	x	NA

* Excess mortality is calculated as the observed minus the expected number of deaths in weeks above threshold

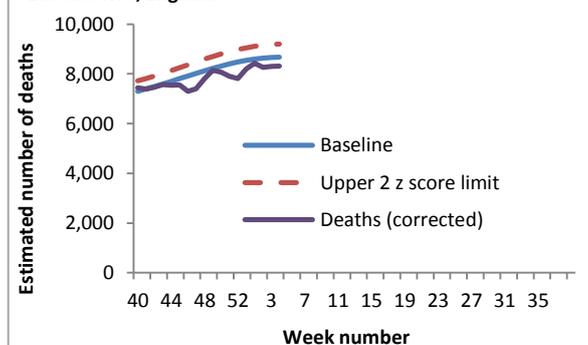
- In week 04 2016 in the devolved administrations, excess mortality above the threshold was seen in Northern Ireland. No significant excess mortality was seen in Wales and Scotland (Table 2).

Table 2: Excess mortality by UK country*

Country	Excess detected in week 04 2016?	Weeks with excess in 2015/16
England	x	NA
Wales	x	NA
Scotland	x	48
Northern Ireland	x	49,52-53,02-04

* Excess mortality is calculated as the observed minus the expected number of deaths in weeks above threshold
NB. Separate total and age-specific models are run for England which may lead to discrepancies between Tables 1 + 2

Figure 10: Excess mortality in 65+ year olds by week of death, EuroMOMO, England



Microbiological surveillance

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In week 04 2016, sixty-three samples tested for influenza through the UK GP sentinel schemes were positive. Two hundred and ninety influenza positive detections were recorded through the DataMart scheme (two hundred and fifteen A(H1N1)pdm09, three A(H3), fifty-four A(not subtyped) and eighteen influenza B).

- Sentinel swabbing schemes in England (RCGP) and the Devolved Administrations

-In week 04, forty-two samples were positive for influenza in England (37 influenza A(H1N1)pdm09, 2 influenza A(H3) and 3 influenza B), twelve samples were positive in Scotland (8 influenza A(H1N1)pdm09 and 4 influenza A (untyped)), seven samples were positive in Wales (7 influenza A(H1N1)) and two samples were positive in Northern Ireland (2 influenza B) (Table 3).

Table 3: Sentinel influenza surveillance in the UK

Week	England	Scotland	Northern Ireland	Wales
53	14/61 (23%)	5/54 (9.3%)	2/8 (-)	1/7 (-)
01	21/142 (14.8%)	9/83 (10.8%)	2/7 (-)	2/4 (-)
02	25/121 (20.7%)	17/97 (17.5%)	4/10 (40%)	4/9 (-)
03	41/172 (23.8%)	20/94 (21.3%)	8/12 (66.7%)	5/9 (-)
04	42/103 (40.8%)	12/66 (18.2%)	2/7 (-)	7/17 (41.2%)

NB. Proportion positive omitted when fewer than 10 specimens tested

- Respiratory DataMart System (England)

In week 04 2016, out of the 1,531 respiratory specimens reported through the Respiratory DataMart System, 290 samples (18.9%) were positive for influenza (215 A(H1N1)pdm09, 3 A(H3), 54 A(not subtyped) and 18 B) (Figure 11). The highest positivity was in the 15-44 year olds at 25.7%. The overall positivity for RSV continued to decrease, with the highest positivity in children aged under 5 years at 9.0% in week 04 (Figure 12). Positivity for parainfluenza remained low at 1.1% in week 04. Positivity for rhinovirus increased slightly to 12.5% and positivity for hMPV remained low at 3.0%. Adenovirus positivity decreased to 1.5% (Figure 13).

Figure 11: DataMart samples positive for influenza, England

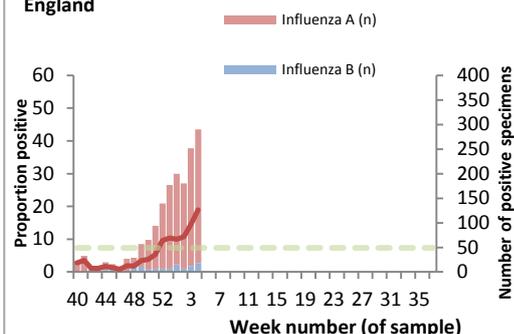


Figure 12: Datamart % RSV positive by age, England

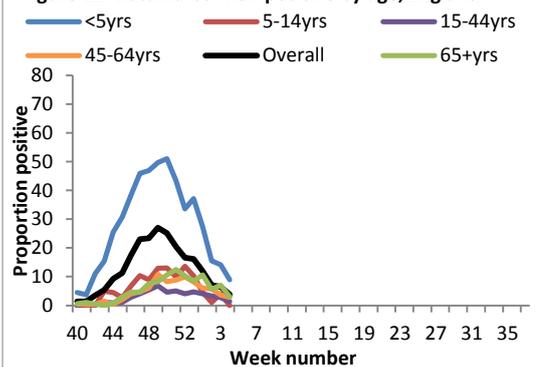
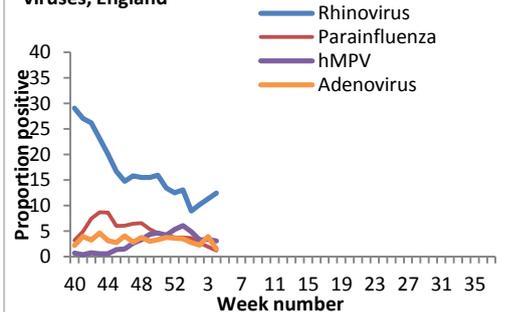


Figure 13: Datamart % positive for other respiratory viruses, England



*The Moving Epidemic Method has been adopted by the European Centre for Disease Prevention and Control to calculate thresholds for GP ILI consultations for the start of influenza activity in a standardised approach across Europe. The threshold to indicate a likelihood of influenza community circulation for Datamart % positive as calculated through the Moving Epidemic Method is 7.4% in 2015/16.

- Virus characterisation

Since the start of the 2015/16 winter influenza season in week 40 2015, the PHE Respiratory Virus Unit has characterised a total of 210 A(H1N1)pdm09 influenza viruses; 87 genetically and 37 both antigenically and genetically. The A(H1N1)pdm09 viruses genetically characterised to date all belong in the genetic subgroup 6B, which was the predominant genetic subgroup in the 2014/15 season. Some heterogeneity has been seen in the A(H1N1)pdm09 viruses genetically characterised to date this season, with some genetic subgroups starting to become evident. Of 160 viruses analysed by HI assays, greater than 80% were antigenically similar to the A/California/7/2009 Northern Hemisphere 2015/16 (H1N1)pdm09 vaccine strain. This data suggests that some antigenic drift variants appear to be circulating, but the majority of viruses antigenically characterised to date are similar to the (H1N1)pdm09 vaccine strain.

Genetic characterisation of eight A(H3N2) influenza viruses since week 38 showed that they belong to genetic group 3C.2a, and are genetically similar to the majority of A(H3N2) viruses circulating in the 2014/15 season. Four A(H3N2) influenza viruses have been isolated and antigenically characterised since week 38 2015. These four viruses were antigenically similar to the A/Switzerland/9715293/2013 H3N2 Northern Hemisphere 2015/16 vaccine strain.

Eleven influenza B viruses have been isolated and antigenically characterised since week 40 2015. One virus was characterised as belonging to the B/Yamagata/16/88-lineage and was antigenically similar to B/Phuket/3073/2013, the influenza B/Yamagata-lineage component of 2015/16 Northern Hemisphere trivalent vaccines. Ten viruses were characterised as belonging to the B/Victoria/2/87 lineage and were antigenically similar to B/Brisbane/60/2008, the influenza B/Victoria-lineage component of 2015/16 Northern Hemisphere quadrivalent vaccines.

- Antiviral susceptibility

Since week 40 2014, 397 influenza A(H1N1)pdm09, one influenza A(H3N2) and three influenza B have been tested for oseltamivir susceptibility with three influenza A(H1N1)pdm09 virus and one influenza A(H3N2) found to be resistant in the UK. One of the A(H1N1)pdm09 resistant samples was obtained from a patient with underlying medical conditions undergoing oseltamivir treatment. The A(H3N2) resistant sample was from an immunocompromised patient receiving oseltamivir treatment, with an E119V amino acid change. 63 influenza A(H1N1)pdm09 and three influenza B have also been tested for zanamivir susceptibility in the UK and all found to be sensitive.

- Antimicrobial susceptibility

-Table 4 shows in the 12 weeks up to 31 January 2016, the proportion of all lower respiratory tract isolates of *Streptococcus pneumoniae*, *Haemophilus influenzae*, *Staphylococcus aureus*, MRSA and MSSA tested and susceptible to antibiotics. These organisms are the key causes of community acquired pneumonia (CAP) and the choice of antibiotics reflects the British Thoracic Society empirical guidelines for management of CAP in adults.

Table 4: Antimicrobial susceptibility surveillance in lower respiratory tract isolates, 12 weeks up to 31 January 2016, E&W

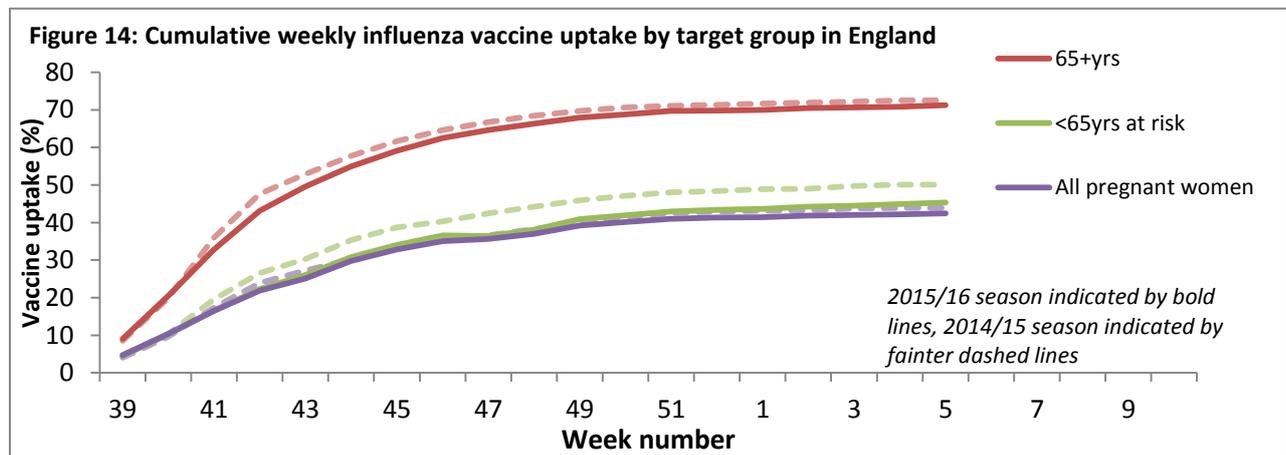
Organism	Antibiotic	Specimens tested (N)	Specimens susceptible (%)
<i>S. pneumoniae</i>	Penicillin	2,529	91
	Macrolides	2,867	83
	Tetracycline	2,773	85
<i>H. influenzae</i>	Amoxicillin/ampicillin	11,500	70
	Co-amoxiclav	11,037	92
	Macrolides	3,782	20
	Tetracycline	11,325	98
<i>S. aureus</i>	Methicillin	3,780	87
	Macrolides	3,724	73
MRSA	Clindamycin	403	47
	Tetracycline	459	91
MSSA	Clindamycin	2,115	79
	Tetracycline	3,046	93

*Macrolides = erythromycin, azithromycin and clarithromycin

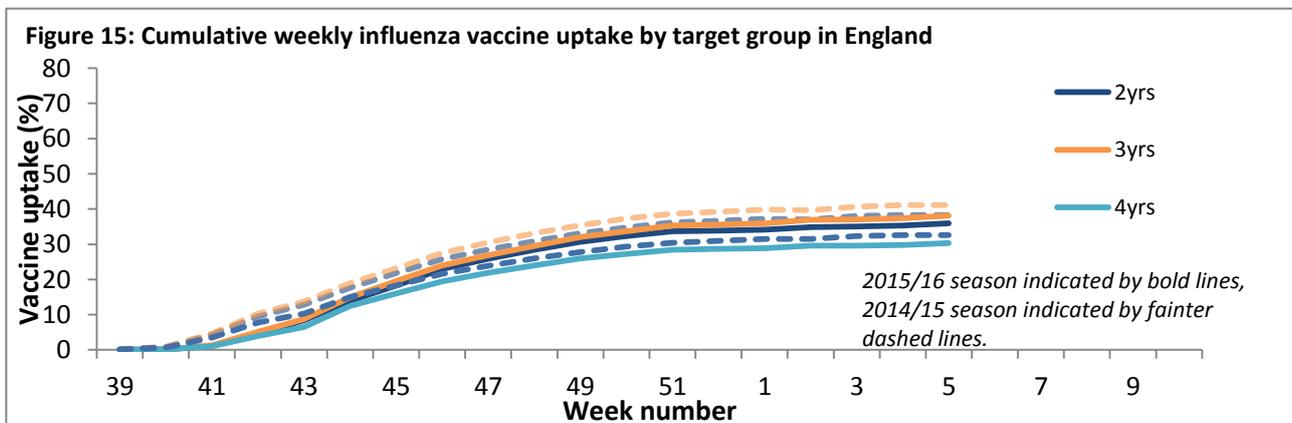
Vaccination

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- Up to week 04 2016 in 87.1% of GP practices reporting weekly to Immform, the provisional proportion of people in England who had received the 2015/16 influenza vaccine in targeted groups was as follows (Figure 14):
 - 45.3% in under 65 years in a clinical risk group
 - 42.4% in pregnant women
 - 71.2% in 65+ year olds



- In 2015/16, all two-, three- and four-year-olds continue to be eligible for flu vaccination. In addition, the programme has been extended to children of school years 1 and 2 age. Up to week 02 2016 in 87.1% of GP practices reporting weekly to Immform, the provisional proportion of people in England who had received the 2015/16 influenza vaccine in targeted groups was as follows (Figure 15)
 - 35.9% in all 2 year olds
 - 38.1% in all 3 year olds
 - 30.3% in all 4 year olds



- Provisional data from the third monthly collection of influenza vaccine uptake by frontline healthcare workers show 47.6% were vaccinated by 31 December 2015 from 95.4% of Trusts, compared to 52.6% vaccinated in the previous season by 31 December 2014. The [report](#) provides uptake at national, area team and CCG level.
- Provisional data from the third monthly collection of influenza vaccine uptake children of school years 1 and 2 age show the proportion of children in England who received the 2015/16 live attenuated intranasal vaccine (LAIV) from 1 September 2015 to 31 December 2015 was as follows: 50.6% in children school year 1 age (5-6 years) and 49.3% in children school year 2 age (6-7 years).
- Provisional data from the third monthly collection of influenza vaccine uptake in GP patients up to 31 December 2015 has been published. The [report](#) provides uptake at national, area team and CCG level.

International Situation

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Globally, influenza activity has increased in some temperate countries of the Northern hemisphere, with influenza A(H1N1)pdm09 being the predominant type. High levels of influenza activity have been reported from some of the Western Asia countries.

- [Europe](#) updated on 29 January 2016 (Joint ECDC-WHO Influenza weekly update)

Influenza A(H1N1)pdm09 has been the predominant virus detected since the start of the season, accounting for 65% of sentinel surveillance detections of influenza-like illness (ILI) and acute respiratory infection (ARI) in the WHO European Region. The predominance of A(H1N1)pdm09 correlates with an increase in cases of severe disease, mainly in people aged 15–64.

For week 03/2016, seven of 11 countries reporting data on severe acute respiratory infection (SARI) indicated increasing numbers of cases. The percentages of influenza-positive SARI specimens were greater than 50% in four of these countries: Armenia, Georgia, the Republic of Moldova and Ukraine.

For week 03/2016, 40% of the specimens from sentinel sources tested positive for influenza virus (Fig. 1). Of 30 countries in which 10 or more sentinel specimens were tested, three countries had positivity rates below 10%; 19, rates of 10–49%; and 8 (Belgium, Denmark, Finland, Ireland, Israel, Lithuania, Portugal and Slovenia), rates over 50%. Of the influenza-virus-positive specimens, 82% contained type A viruses, with A(H1N1)pdm09 viruses predominant, account for 85% of those subtyped (Table 1), an increase from 74% in week 02/2016.

- [United States of America](#) Updated on 29 January 2016 (Centre for Disease Control report)

During week 03 2016, influenza activity increased slightly in the United States. The most frequently identified type reported to be influenza A with influenza A (H1N1)pdm09 viruses predominating.

Nationwide during week 03, the proportion of outpatient visits for influenza-like illness (ILI) was 2.2%, which is above the national baseline of 2.1%.

The percent positive for laboratory confirmed influenza detections has increased.

During week 03, 6.8% of all deaths reported through the 122 Cities Mortality Reporting System were due to P&I. This percentage was above the epidemic threshold of 7.2% for week 03. A total of seven influenza associated paediatric deaths have been reported during the 2015-2016 season.

- [Canada](#) Updated on 22 January 2016 (Public Health Agency report)

Overall in week 03, seasonal influenza activity increased from the previous week but remains below expected levels for this time of the year.

The percent positive for laboratory confirmed influenza detections increased from 7.0% in week 02 to 12.4% in week 03. Among subtyped influenza detections, influenza A(H1N1) was the most common influenza A virus detected across Canada.

The national influenza-like-illness (ILI) consultation rate has increased from 12.5 per 1,000 visits in week 02 to 15.6 per 1,000 visits in week 03. In week 03, the highest ILI consultation rate was found in the 0-4 years of age and the lowest was found in the >65 years of age group.

- [Global influenza update](#) Updated on 25 January 2015 (WHO website)

High levels of influenza activity continued in some countries in western Asia. And increasing influenza activity was reported in northern America, northern and eastern Europe and northern/temperate Asia. Most detected influenza viruses were influenza A(H1N1)pdm09.

Influenza activity was slowly increasing but still below seasonal expected levels in northern America. In northern and eastern Europe increasing influenza activity was reported, with still low activity in Western and Southern Europe. An increase in severe acute respiratory infections due to influenza A(H1N1)pdm09 was reported from some eastern European countries.

In northern/temperate Asia, influenza activity was on-going in Mongolia and was increasing in the Republic of Korea.

In central and western Asia, influenza activity remained at high levels where Israel, Jordan and Oman reported increased influenza activity, predominantly due to influenza A(H1N1)pdm09 and influenza B viruses. Pakistan reported also elevated influenza activity, predominantly due to influenza A(H1N1)pdm09.

Few influenza virus detections were reported by countries in tropical Africa.

In tropical countries of the Americas, Central America and the Caribbean, respiratory virus activity was at low levels.

In tropical Asia, countries in southern and south east Asia overall reported on-going low influenza activity.

In temperate countries of the Southern Hemisphere respiratory virus activity remained low.

Based on FluNet reporting, the WHO GISRS laboratories tested more than 65,732 specimens between 28 December 2015 and 10 January 2016. 10,502 were positive for influenza viruses, of which 8,481 (80.8%) were typed as influenza A and 201 (19.2%) as influenza B. Of the sub-typed influenza A viruses, 5,506 (80.2%) were influenza A(H1N1)pdm09 and 1,357 (19.8%) were influenza A(H3N2). Of the characterized B viruses, 460 (49.1%) belonged to the B-Yamagata lineage and 477 (50.9%) to the B-Victoria lineage.

- [Avian Influenza](#) latest update on 25 January 2016 (WHO website)

Influenza A(H5N6)

On [18 January 2016](#), the National Health and Family Planning Commission (NHFPC) of China notified WHO of 1 additional laboratory-confirmed case of human infection with avian influenza (H5N6) virus. A total of nine A(H5N6) have been reported so far around the world, with the first human infection reported in May 2014 in China's southwest province of Sichuan.

Since 2013 through to 20 January 2016, ten cases of avian influenza A(H5N6) have been detected of which nine were notified to [WHO](#) and one was reported in the scientific literature.¹ All nine cases notified to WHO had clinically severe disease. The case reported in the literature, a five-year-old female, was a mild case detected through routine surveillance activities.

Influenza A(H7N9)

On [11 January 2016](#), the National Health and Family Planning Commission (NHFPC) of China notified WHO of 10 additional laboratory-confirmed cases of human infection with avian influenza A (H7N9) virus, including 3 deaths. For further updates and WHO travel and clinical management advice, please see the [WHO website](#).

Since the last WHO Influenza update on 18 December 2015, ten new laboratory-confirmed human cases of avian influenza A(H7N9) virus infection were reported to [WHO](#). Cases were reported from Guangdong, Jiangsu, Jiangxi and Zhejiang provinces of China with onsets between 24 November 2015 and 24 December 2015. All cases were exposed to live or slaughtered poultry. A total of 693 laboratory-confirmed cases of human infection with avian influenza A(H7N9) viruses, including at least 277 deaths have been reported to WHO.

Influenza A(H5N1)

From 2003 through 20 January 2016, 846 laboratory-confirmed human cases of avian influenza A(H5N1) virus infection have been officially reported to [WHO](#) from 16 countries. Of these cases, 449 have died. Various influenza A(H5) subtypes, such as influenza A(H5N1), A(H5N2), A(H5N3), A(H5N6), A(H5N8) and A(H5N9), continue to be detected in birds in West Africa, Europe and Asia, according to recent reports received by OIE. Since last month's report on detections of avian influenza A(H5) viruses in birds in France, no human infections have been identified. Although the influenza A(H5) viruses might have the potential to cause disease in humans, so far no human cases of infection have been reported, with exception of the

human infections with influenza A(H5N1) and A(H5N6) viruses in China. Overall, the public health risk assessment for avian influenza A(H5) viruses remains unchanged since the assessment of [17 July 2015](#).

- [Middle East respiratory syndrome coronavirus \(MERS-CoV\)](#) latest update on 29 January 2016

On [24 January 2016](#), the National IHR Focal Point of Thailand notified WHO of 1 laboratory-confirmed case of Middle East respiratory syndrome coronavirus (MERS-CoV) infection. This is the country's second case of MERS-CoV infection (see DON published on 10 July 2015).

Between [11 and 14 January 2016](#), the National IHR Focal Point of the United Arab Emirates notified WHO of 2 additional cases of Middle East respiratory syndrome coronavirus (MERS-CoV) infection, including 1 death.

Between [27 December 2015 and 13 January 2016](#), the National IHR Focal Point for the Kingdom of Saudi Arabia notified WHO of 4 additional cases of Middle East respiratory syndrome coronavirus (MERS-CoV) infection.

Up to 03 February 2016, a total of four cases of Middle East respiratory syndrome coronavirus, MERS-CoV, (two imported and two linked cases) have been confirmed in the UK. On-going surveillance has identified 658 suspect cases in the UK that have been investigated for MERS-CoV and tested negative.

Globally, since September 2012, WHO has been notified of 1,638 laboratory-confirmed cases of infection with MERS-CoV, including at least 587 related deaths. Further information on management and guidance of possible cases is available [online](#). The latest ECDC MERS-CoV risk assessment can be found [here](#), where it is highlighted that risk of widespread transmission of MERS-CoV remains low.

Acknowledgements

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Vaccination

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- Childhood flu programme information for healthcare practitioners ([Public Health England](#))
- 2015/16 Northern Hemisphere seasonal influenza vaccine recommendations ([WHO](#))